

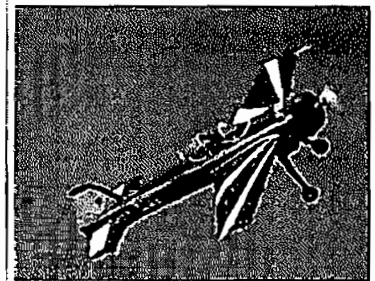
Yakovlev Yak-55

From Wikipedia, the free encyclopedia

The **Yakovlev Yak-55** and 55M(short wing) is an aerobatic aircraft designed by Slava Kondratiev. It has a thick mid-mounted symmetrical wing and is of a conventional monocoque all-metal construction. The undercarriage is fixed with sprung main gear and tailwheel. The engine is a 360 horsepower Vedeneyev M14P.

The prototype first flew in May 1981 and was shown to the West in 1982. However, the Russian aerobatic team did use the aircraft until 1984 when they won the World Aerobatic Championship.

The aircraft has been relatively free of Service Bulletins (Airworthiness Directives), and has proved exceedingly effective in competition at all levels. The obvious capabilities of the aircraft and its success in use, together with the relatively large numbers built (some 250) have meant that owners make relatively few modifications and that few are needed. The cockpit is roomy (but a bit short in leg length) and the aircraft is a delight to fly although some say it is difficult to land neatly. Thus affectionately nicknamed the crop duster.



Yak-55 performing low level airshow aerobatics. (Pilot Mark Hensman.)

Performance

- Empty weight 640 kg
- Maximum speed (V_{ne}) 450 km/h
- Maximum manoeuvring speed (V_a) 360 km/h
- Rate of climb 1000 m per minute (3200 ft) with M14P/ or 1600 m/min (5000 ft) with M14PF
- Rate of roll 345° per second
- Take-off run 125 m (hard surface)
- Landing run 175 m (soft) to 450 m (hard.)

SP-55

The **SP-55** is a development of the **Yak-55** and was released in the late 1990s. The SP-55 incorporates all of the proven structural components of the Yak-55, but, amongst other changes, uses composite flying controls and has a lighter weight giving improved manoeuvrability. When equipped with the M14PF 400 hp engine, the SP-55 has been said to surpass the performance of the Sukhoi SU-31. The SP-55 is manufactured at the Arsenyiev factory in the far East of Russia.

References

- YAK-55M Operators Handbook

Vedeneyev M14P

From Wikipedia, the free encyclopedia

The **Vedeneyev M14P** is a nine cylinder radial, four-stroke, air cooled petrol engine. The induction system uses a gear driven supercharger and a carburettor of automatic mixture type. Power is transmitted to the propeller via a reduction gearbox. Its design dates from the 1930s. It is a development of Ivchenko AI-14 engine.

The engine has a speed governor, carburettor, two magnetos, mechanical fuel pump, generator and oil pump. The engine remains fully operational during inverted flight. The engine is pneumatically started.

The engine is left turning (counter-clockwise) when viewed from the cockpit. This is opposite rotation to most western aero-engines.

In recent times, the M-14P has become increasingly popular in experimental aircraft designs such as the Murphy Moose and others.

- Engine Power Output 360-450 hp, last development: 460hp electronic injection (much less consumption: ~30liters/hour at cruise power)
- Weight 214 kg (472 lb)
- Displacement 8 lit
- Time Between Overhauls, TBO 2250 hours by US standards. Typically the Russian logbook states "engine life 2250 hours" with IRAN's or Inspect and Replace As Necessary every 500 hours or so. Some have confused these IRAN's as low TBO's or overhauls.

This engine was used by the Yakovlev and Sukhoi Design Bureau's.

References

- YAK-55M Operator Handbook
- M14 Log books

See also

- Radial engine

Retrieved from "http://en.wikipedia.org/wiki/Vedeneyev_M14P"

Categories: Aircraft piston engines | Aircraft manufacturers of the Soviet Union and Russia | 1950s aircraft stubs

